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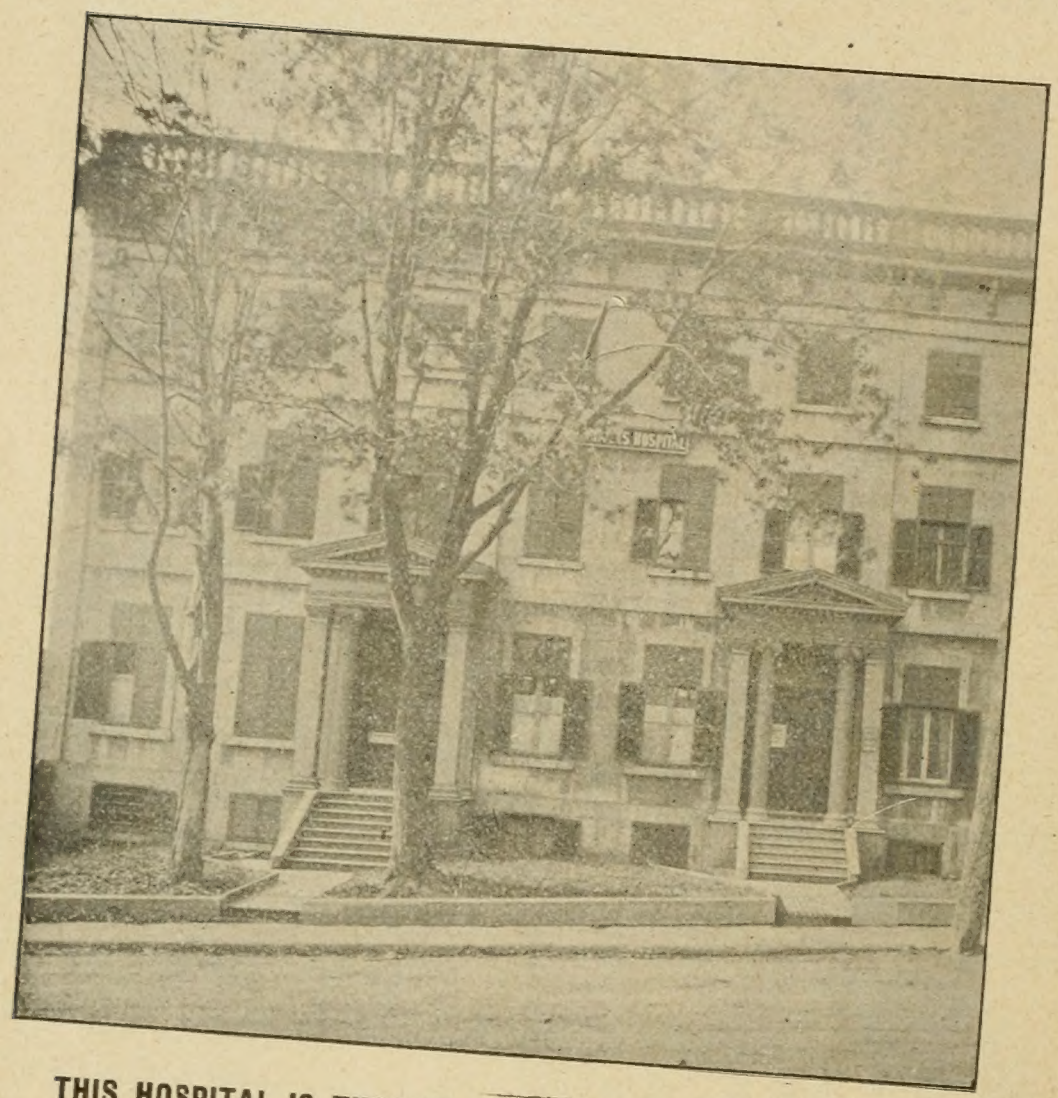

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CANADA
MEDICAL RECORD

OCTOBER, 1902.

Original Communications.

CASE OF PLACENTA PRAEVIA.

WITH THREATENING URÆMIC CONVULSIONS; RAPID MANUAL DILATATION OF THE OS UTERI; TURNING AND DELIVERY; RECOVERY.*

By A. Lapthorn Smith, M.D., Fellow of the American Gynecological Society; Professor of Clinical Gynecology, Bishop's College, Montreal and Professor of Gynecology in the University of Vermont, Burlington; Gynecologist to the Western Hospital; Surgeon-in-Chief of the Samaritan Hospital; Gynecologist to the Montreal Dispensary; and Consulting Gynecologist to the Women's Hospital, Montreal.

By permission of Dr. S. F. Wilson, of this city, who called me in consultation, I am allowed to report this case. Mrs. M., the mother of three children, had always been in robust health until her first pregnancy, eight years ago, when she nearly died from puerperal convulsions. She was only saved then, Dr. Wilson informed me, by *accouchement force* at seven months, after having had convulsions every week from the fourth month, in spite of treatment. She became pregnant with her fourth child about the first of November, and every month after that she had considerable hemorrhage without, however, sending for her doctor until about the sixth month, when she had such a severe one that she sent for Dr. Wilson, who at once diagnosed placenta previa and packed and gave ergot to stop the hemorrhage until I could be sent for.

On my arrival the woman was in a very serious condition requiring saline enemata and hypodermics of strychnine. While Dr. Wilson was doing these things and his partner, Dr. Morrison, was administering the anaesthetic, I was preparing my hands, and in a few minutes with one hand on the abdomen and the other in the uterus I had rapidly dilated the cervix and caught a foot and brought it down without rupturing the bag of waters. This was then done and in less time than it takes to tell it the six months foetus was delivered

* Read before the Clinical Society of the Montreal Dispensary, June, 1902.

living, but not viable. The placenta quickly followed and on examining it fully one half of it could be seen to be covered by a dark firm clot corresponding to the surface which had become detached by the first contractions. The hemorrhage, which had been furious until I introduced my hand, seemed to have stopped from that moment, and there was no bleeding after the extraction of the child, the uterus having then been able to contract enough to close the bleeding openings. The child died in half an hour and the mother, after running the gauntlet of the profound anaemia as well as the condition of the kidneys, gradually came back to life. She later developed a temperature and has now a pelvic abcess, probably a pus tube, which Dr. Wilson intends to have me open by the vagina and drain in the meantime, to be followed later, when her strength will bear it, by an abdominal incision. This was my third case of placenta previa and in view of the present tendency to perform so serious an operation as Caesarian section for the relief of the condition, it may be of interest to refer to the other two cases, both of which terminated in recovery of the mother. My first case occurred twenty-three years ago in a woman four months pregnant. This was just before Braxton Hicks had published his method; so I did the best I could with the knowledge we then had at our disposal, which was to put the woman in the knee-chest position and tampon firmly the vagina. The result could not have been more satisfactory; she did not lose a drop of blood after that; and in eight hours I saw the woman safely delivered; first the cylinder of tightly packed cotton, about four inches long, then about two inches of clot, then the placenta, which must have been centrally implanted, for it fitted on the child's head like a Scotch bonnet, and then came the child; all of them coming out in one piece, so to speak. This woman was up and cleaning offices in less than ten days. The next case was a woman near term who was suddenly taken with a terrible hemorrhage. On examination the placenta was found to be centrally implanted. I was very ill at the time and had to hand the case over to Dr. Johnson, who summoned an expert, who immediately anaesthetized the patient and turned and delivered. There was a gush of blood which flew across the room as he introduced his hand, but the moment he drew on the foot the bleeding stopped and did not return. This child was too asphyxiated by the mother's hemorrhage to live, but the mother made a good recovery.

Judging from my knowledge of these three cases, I cannot see how any one could justify himself in performing a Caesarian section, far less in completely removing the tubes and ovaries with the uterus, as has recently been so strongly advocated by several obstetricians of the first rank. The only

possible excuse which they could give is that when Caesarian section is performed before the mother or child have been weakened by hemorrhage, the chances of the child should be much better than by version; but how are we to discover cases of placenta praevia before the hemorrhage begins? Moreover, it is quite probable in my mind that it the child is viable it would have just as good a chance of surviving if delivered by version as when delivered by Caesarian section. While for the majority of cases the child does not count for anything, for the simple reason that it is already dead or that it is not possible for it to live, no matter how it is delivered—while of the total removal of the uterus and appendages it is no excuse to say, as some of these authorities do, that the woman after having the case explained to her was quite willing that she might be rendered unable to have another pregnancy; a woman in that condition is a very bad judge of the advantages of maternity. To the general practitioner who meets with this appalling hemorrhage, I would say "summon expert help immediately, and while waiting for him to come, to control the hemorrhage for a few minutes by means of clean handkerchiefs soaked in vinegar packed in the vagina; but failing to obtain assistance promptly I would advise the rapid but thorough sterilizing of the hands and a partial anaesthetization of the patient by another doctor, or even by a neighbour, with the A. C. E. mixture and then to dilate the os with the fingers formed into a cone, so that they fill the os pretty thoroughly. As soon as the hand can be made to enter the uterus, grasp a foot with the right hand and assist the version by the left hand on the abdomen; there will, as a rule, be no more hemorrhage after the soft plug formed by the child's thigh and buttock covers the bleeding sinuses." The cause of all the deaths of the mother, and they are not many under this method, and of many of the deaths of the viable child, are not due to the method, but to the delay in employing it, and these conditions are as essential in Caesarian section for its success, both as regards the mother and the child. Even in a primipara with the os closed it is invariably softened by the pregnant condition so that in twenty or thirty minutes at most first one and then two and then three fingers can be bored into the uterus until the constricting muscles are tired out and the whole hand can be passed in. The hemorrhage almost always stops the moment the foot is drawn down.

I would also like to say a few words about the other feature of the first case above reported, namely, the convulsions. I believe that more women have died from the remedies usually employed than from the disease; I mean the prolonged use of chloroform and chloral. By the hypodermic injection of half a grain of morphine followed in ten minutes by the hypo-

dermic injection of twenty-five minims of tincture of veratrum viride, I have in my last three cases at once brought the pulse down from 160 to 50 or 60 and the woman had no convulsion later than ten minutes after. My former assistant, Dr. De Cotret, now director of the largest lying-in hospital in Canada, who introduced the veratrum treatment at my request, tells me that he has had thirty-eight cases of eclampsia without a death of a mother.

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Selected Articles.

THE STUDY OF THE TREATMENT OF VARIOUS FORMS OF HEART DISEASE.

By G. R. Johnson, M. D., Philadelphia.

Undoubtedly, the most important point in the treatment of heart disease is rest. In the most severe stages this is absolutely necessary, for in this condition syncope is almost certain to follow any attempt at work, or even walking. The use of physiological mechanics is all-important in the treatment of heart cases, for, while much can be done by the use of drugs, yet nothing takes the place of rest. In fact, there are many cases in which drugs appear to be utterly useless, and it is possible to obtain improvement only by the use of long rest, lasting for weeks or months. The reason for this is very evident; anything which reduces the number of beats of the heart naturally reduces its work, and in a diseased organ this becomes a matter of moment. To use a disabled engine as little as possible renders its existence for a longer period possible. So it is with the heart, which is the machine from which life, as we know it, really springs.

Outside of the use of rest, it is well to consider the possibility of reducing the quantity of blood that comes into the heart from the right auricle and must be forced by that organ through the lungs and later driven through the body by the left ventricle. There is an old-time, deep-seated prejudice against the use of venesection, but it is a question whether this prejudice is not unreasoning. It is true possibly that venesection may be required only in urgent cases, but in these when the right ventricle is dammed with venous blood so that its contraction is imperiled and the stoppage

of the heart is threatened, it may be the actual means of preserving life. Under these circumstances it seems to be imperatively demanded, and any old-time prejudice against its use should not be allowed to interfere with the doctor's decision. Depletion can be accomplished, however, by other means, such as by increasing the evacuation of the bowels, the kidneys and the skin. For example, by the use of purgatives, by which the watery secretions of the bowels are increased and by the use of real stimulants, such as the acetate of potash and nitrous ether. Again, by the use of diaphoretics the secretion from the skin can be increased.

When we come to the actual drug treatment of cardiac cases, we find, first, the use of the cardiac tonics, of which the most common is digitalis. This drug is undoubtedly very trustworthy and efficient in properly selected cases. It requires a considerable caution in its use, for, on the one hand, it is necessary not to overdose the patient; and there is also the danger of the accumulative action of digitalis bursting, as it were, with a sudden storm, through the patient's system. While, on the other hand, if not enough of the medicine is given when the symptoms are critical and relief demanded, its administration is worse than useless, for it creates a false confidence. Undoubtedly, the tendency of the profession is to err on the side of giving too small doses of digitalis.

Another drug which has lately sprung into prominence is strophanthus. It is an excellent heart tonic, though perhaps not as trustworthy as digitalis. A very efficient way of giving strophanthus is to give it in the form of the tincture in combination with the tincture of nux vomica. If these two drugs are given in equal proportions they produce, as a rule, an excellent effect, not only upon the heart, but upon the nervous system in general. The citrate of caffeine and strychnine are also excellent drugs in their place, the strychnine being indicated rather where a general nervous tonic is required.

To illustrate the use of treatment in a case of cardiac trouble, permit me to quote the following case, which is that of a man, aged 45 years, who had been under observation for ten years. He first came under my care to be treated for acute articular rheumatism, and on each occasion a presystolic mitral murmur was heard, while later there developed a tricuspid murmur and the phenomenon of a pulsating liver.

For the past few years he has been obliged to stay in bed from time to time on account of his shortness of breath.

After each attack he resumed his labour, which was severe in character, but in course of a few weeks he would again be forced to return to bed. Recently, after exposure to severe cold, he developed a cough. His legs began to swell. He went to bed and grew rapidly worse. On examination I found that he was suffering from extreme shortness of breath. His face was cyanosed. He had a small rapid pulse, ranging nearly 150 a minute, while his respirations were shallow and rapid. This condition grew rapidly worse, so that I immediately bled him, 10 ozs. being taken from him, and I gave him a hypodermic injection of brandy and 20 drops of digitalis. This was followed by speedy relief, so that within four hours the pulse fell considerably in its rate and his respiration quieted down. He is now in a much better condition, although he still presents, of course, the characteristic appearance of mitral stenosis. His face is congested. He shows the characteristic club finger ends and has a dropsical condition of the feet and ankles. His cardiac impulse is displaced outward and downward, and there is also a marked epigastric impulse. On listening over the cardiac area I find a long presystolic murmur at the apex with a tricuspid systolic murmur over the sternum. Scattered throughout his chest are numerous sibilant rales, while there is absence of breath sounds at the base of both lungs. I gave this man fifteen drops of the tincture of digitalis every four hours, and on the following day his pulse gradually sank lower and lower, and two days later it fell to eighty, when I reduced the dose of digitalis to 10 drops every two hours.

His physical condition also improved so that his ankles were no longer dropsical and the duliness at the base of the lungs was not so noticeable. Under treatment and rest the patient improved until the tricuspid murmur was no longer noticed.

This form of heart disease is one of the most frequent which the general practitioner is called upon to treat. Mitral constriction strains the heart to its utmost, and, while compensation can be maintained moderately well when the patient remains at rest, it becomes a dangerous condition when the patient is forced to work ; for the additional strain upon the heart reduces its compensation, backward pressure is exerted upon the lungs and right ventricle, as a result of of which tricuspid regurgitation takes place, followed by

dropsy, pulsating liver, venous distention throughout the body and albuminous urine. The action of the heart at the same time is irregular, rapid and feeble in impulse, but fortunately for the patient he is able frequently to recover to a great extent from its serious condition. Undoubtedly, many physicians have patients who have been almost in a dying condition a number of times, from which they have recovered to a comparative degree by careful treatment.

In giving the tincture of digitalis it is well to watch the patient carefully, and, if the disease does not produce material improvement within 24 or 48 hours, it is well to increase it. Many physicians never begin with less than 15 minims every four hours, which makes a dram and a half in the 24. If improvement does not set in, the dose can be increased to 15 minims every three hours, or 20 every four hours continually, but these doses must be watched, for the object is to get a speedy impression upon the heart and then withdraw as much of the drug as is not necessary. The bugaboo of the accumulative effect of digitalis still lingers around this drug. This depended upon the theory that the patient might take harmless doses of the drug for some days or weeks and then suddenly a poisonous effect would be noticed which might end even in sudden death. In the case of digitalis this is due to the fact that it is not eliminated as rapidly as other drugs, so that after a time, the interval not being long enough, the drug is reabsorbed into the system and its toxic effect is noted. However, if the drug is given for a long period in the amount of half a dram of 48 minims a day, this effect as a rule is not noticed, and in this way digitalis may be given for longer periods of time without producing any serious results. The advantage which strophanthus is supposed to have over digitalis is that it does not increase arterial tension. Five minims of the tincture of strophanthus is equal in dose to 10 or 15 of the tincture of digitalis, for it was found that, weight for weight, strophanthus is the more powerful drug, so that its official strength has been reduced from one in ten to one in twenty, while the strength of the tincture of digitalis is one in eight. The other remedies in use in cardiac trouble are similar in action, but are not as strong nor as powerful as these two drugs.

There are many points in regard to the use of cardiac tonics in the various forms of valvular disease. For example: there is a dispute as to the action of digitalis in aortic regurgitation. It has been criticized by some authorities on the theory that in many cases aortic disease is accompanied

by hypertrophy of the left ventricle, and that in consequence digitalis is apt to increase the over-action of this organ. Again, and what seems to be a more vital objection, is that digitalis lengthens the diastolic interval and that regurgitation occurs in this time so that the amount of blood which falls back from the aorta is greater under the influence of the drug. In consequence, there is an increased tendency to cardiac dilatation and a greater probability of syncope resulting from the diminution of the supply of blood sent to the brain. In the experience of many authorities, however, the main objection to digitalis in this form of heart disease seems to be, not that it does any special harm, but that it does very little good. It is in cases of mitral disease in which digitalis seems to be especially happy. It is the rapid, feeble and irregular action of mitral disease which is peculiarly benefited. When aortic trouble is complicated by mitral regurgitation, then digitalis is of advantage.

The best diuretics for use in heart trouble are undoubtedly the acetate of potash and squills. The so-called diuretic mixture, known as the *misturi potassii acetatis composcta*, is peculiarly useful in this condition. It contains 30 grains of the spirit of nitrous ether to the dose, together with 15 minims of the tincture of squills, 20 grains of the acetate of potash and one dram of *succus scoparii*. The digitalis can be given in this mixture, and it makes a peculiarly happy combination in the majority of cases. When the cardiac failure is imminent and a very decided effect upon the heart is desired, the digitalis may be combined with the carbonate of ammonia given in 5 grain doses every 2 or three hours. The unfortunate feature in regard to this treatment is, that it may fail on account of nausea, or on account of the rapid fall of the pulse. It is often well, however, to give the digitalis with water alone, considering only the action upon the heart. Taylor, of Guy's Hospital, has found that the action of digitalis is often improved, especially in cases where it seemed to have no effect, by the addition of the tincture of belladonna. This idea occurred to him in experimentation some years ago, and he has reported a number of cases in which he met with success.

It is less difficult nowadays to recognize such forms of heart trouble as infective endocarditis. As the treatment of ordinary heart disease has grown to be more scientific, there has been still much to learn in regard to the pathology of infective endocarditis, especially as to the role played by micro-organisms. In Bramwell's experiments the introduction of

material from ulcerated aorti valves into the blood current of healthy rabbits did not produce any special result. Orth found that if he passed a fine probe down the carotid artery of a rabbit and injured the aortic valves and then injected into the blood vessels bacteria from pus, that he could produce this condition unless he previously injured the valve. As a result of these experiments we might believe that a diseased condition of the valves is necessary to produce infective endocarditis, and when we come to study these cases we find that there is frequently a history of the previous rheumatic heart affection. In scarlet fever and diphtheria we find that the majority of cases escape contamination even when bacilli are found in the blood, unless there exists an old valvular lesion. Rheumatism may predispose to disease, but it does not itself produce it unless it is associated with micro-organisms. Osler has found, as the result of his study on the subject, that 11 per cent. of his cases of infective endocarditis followed puerperal fever. He explains this by the fact that the already poisoned blood of pregnancy becomes charged with material absorbed from the uterus, and the tendency to thrombosis occurs. It is probable that all septic conditions of the blood are more or less exposed to this shock, and infective endocarditis can follow even slight injuries if the wound becomes unhealthy. There is a peculiar likelihood of this occurring especially in pneumonia at a time when the crisis is expected, or when the inflammatory exudate is clearing away and an absorption is taking place. Then, all of a sudden, there may develop a septic endocarditis. Netter has gone over this subject very thoroughly and has found that in endocarditis following pneumonia the same kind of microbes in the valves as in inflamed lungs, and taking the microbes from the pneumonic lesions and injecting them into the lungs of rabbits whose carotid valves had been experimentally injured, he produced septic endocarditis. There is one great peculiarity in regard to infective endocarditis, and that is the enlargement of the spleen. Acting as a sort of filter, this organ is especially exposed to the poisonous products which may develop in the blood. It has been found in nearly all post-mortems on infective endocarditis that the spleen was enlarged and diseased. It seems as if this organ supplied the proper food for the development of these microbes.

The treatment of infective endocarditis has not been very brilliant. In fact, the disease as a rule is fatal. Here and there cases are reported in which the ravages of the

disease have stopped and the patients have recovered, but, as a rule, a permanent cure is scarcely to be expected. As infective endocarditis is generally the consequence of some form of blood poisoning, the treatment depends considerably on that of septicæmia. Oliver, who has had considerable experience in this class of cases, has found the most satisfactory results from the use of sulpho-carbolate of sodium given in half dram doses three or four times a day. He also administered salol and betanaphthol. Quinine has also been recommended, but its results are doubtful. The ideal treatment, of course, in this class of cases would be the injection of some material possessing bacteriological properties, but, unfortunately, such preparations which are harmless for the blood and tissues have not yet been developed; possibly the present decade will develop them.

The following case is interesting as illustrating a case of infective endocarditis. The man was a mechanic with good family and personal history. While at his work some months before, he struck his chest in the region of his heart, but he never was seriously ill until about six months after he was injured, when he noticed that he could not work properly and he suffered from shortness of breath and pain in the cardiac region and his legs began to swell. This went on until he had reached such a state that he could not lie down in bed. His movements became painful, and a pallid, anxious expression appeared upon his face. His respirations became sallow and rapid, his tongue furred, his digestion wretched and there appeared also great thirst. But his most troublesome symptoms, he states, were insomnia and shortness of breath. The physical examination exhibited the fact that his apex beat was displaced downward and outward, but there was a greater increase in the deep area of cardiac dullness. A blowing systolic murmur could be heard to the left of the ensiform cartilage and there was also jugular congestion and a pulsating liver. His condition remained about the same for a number of days after coming under my care until one afternoon he had a chill followed by extreme shortness of breath. His pulse became very irregular in a minute and finally he died.

The physical signs pointed to the probability of the disease being due to insufficiency of the tricuspid valves. The fact that the patient had profuse perspirations and intermittent fever pointed to the fact that he was subject to infective endocarditis. As to the relation between the injury to his chest and the infective endocarditis, there is probably no

doubt that the injury produced the heart lesion and that vegetations appeared and the disease later assumed an infective condition.

On examination of his heart after death it was found that there was no special disease in either the left ventricle or the right ventricle, while there was a dilatation of the right auricle, and at the base of the tricuspid valve there was a vegetation which projected into the cavity for nearly an inch. On making cultures from this granulation the presence of staphylococci was demonstrated. Undoubtedly, there were three currents produced in the heart action; (1) a tricuspid direct current; (2) a tricuspid regurgitant current, and (3) a current from the left side of the heart into the right side through a perforation which was found. This cardiac condition undoubtedly explains his symptoms, the insomnia being due to the disturbance of circulation in his brain—*The Medicus.*

THE CAUSE OF DIABETIC COMA.

It may now be accepted that oxybutyric acid is the cause of diabetic coma. Series of laboratory investigations and clinical observations have fairly well determined this point. For several years chemists have been working along this line and have finally reached rather definite conclusions in the matter.

This acid, which is a product of the fermentation of starch, sugar, milk and of various other substances, has been shown to be present in the blood and urine in very large quantities in cases of diabetic coma. Treatment intended to neutralize this acid in the blood has given results which tend to confirm the above-mentioned conclusions. Besides this, coma, similar in all respects to diabetic coma, has been caused in monkeys and in other animals by poisoning them with oxybutyric acid.

From the decomposition of this acid, acetone and diacetic acid arise, so that tests for these latter substances serve to show the presence of oxybutyric acid in any liquid. The chloroform-like odor of acetone is to be noticed in the breath of patients with diabetic coma, and may also be detected in the urine. Indeed acetonaemia was the term proposed only last year for this condition of diabetic toxaemia. But now we learn that beta-oxybutyric acid and not acetone is the true poison.

It is surprising how much of this acid is found in the urine of such cases. It may amount to as much as from

one to four onces daily. Half an ounce daily is frequently found in cases of diabetes when there is no evidence of coma.

Recently it is suggested that a determination of the amount of ammonia in the urine may be used as affording an estimate of the quantity of oxybutyric acid present, since this acid constantly appears in the urine in combination with ammonia. Testing for excess of ammonia is simpler than testing for the acid. We have seen no precise manner of testing suggested, but it is well known that adding K O H solution and boiling will set free the combined ammonia in any mixture. The escaping gas may be dried, collected and measured in several different ways.

Indeed the steps which led up to this discovery of oxybutyric acid in the urine began with the fact that ammonia was found to be in excess in diabetic urine. Ordinarily in health the combined ammonia secreted by the kidneys in twenty-four hours is 12 to 15 grains or about eight-tenths of a gram. It was first noted that in diabetes the amount of ammonia in the urine was considerably increased. As this ammonia was combined, the necessary inference was that there was an increase in some acid excreted by the kidneys. This was then shown to be an organic acid, and, at the same time, the similarity between acid poisoning in rabbits and the coma of diabetes was pointed out. Upon this evidence was instituted the alkali treatment of diabetic coma. This organic acid was finally shown to be oxybutyric acid; and it was further shown that decomposition of this acid gives rise to acetone and diacetic acid, substances which had already been observed in urine.

Large doses of some alkali, as for instance two or three drams of sod. bicarb., may be given thrice daily to combat the condition of threatening coma. Alkaline solutions, isotonic with the blood, may be used subcutaneously when a fatal issue is impending.

The question of diet has also received a ray of light from these discoveries. The profession has been suspecting that too exclusive a diet does more harm than good in diabetes. Now it has been observed that acetone appeared in the urine of a healthy person when deprived of food for a period of time. The same thing was found to be true in most diseases in which nutrition falls much below par. And recent experiments have shown that when a healthy person is kept for some time upon a diet very poor in carbohydrates, oxybutyric appears in the urine. Add to these observations the clinical fact that some diabetes, when put upon too rigid diet promptly die of coma, and the conclusion follows that a

moderate amount of carbohydrates allowed to diabetics together with sufficient alkali when needed is better than a diet which excludes all starches and sugars.

This discovery has opened up a new field of investigation, and it is probable that it is not yet fully worked over. Already much light has been thrown upon the questions of the causation, the general management and the treatment of diabetes, and we may expect other discoveries of value along the same line to be made by our learned friends and allies, the physiological chemists.—*Medicus.*

Progress of Medical Science.

MEDICINE AND NEUROLOGY

IN CHARGE OF

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PLEURAL EFFUSION OF ENLARGED LIVER.

To distinguish between a small pleural effusion and an enlarged liver or subdiaphragmatic abscess, Henry Jackson (*Boston Medical and Surgical Journal*) determines by percussion the upper line of dullness on the chest wall and then has the patient breathe in deeply and hold the breath. The upper area of dullness will now be found at a lower level if the liver and not the pleura is involved.—*Denver Medical Times.*

THE DIFFERENTIAL DIAGNOSIS OF SMALLPOX AND CHICKENPOX.

In a letter addressed to a contemporary, Dr. G. S. Perkins calls attention to a simple means of distinguishing chickenpox from smallpox, which deserves to be more widely known. He points out that the vesicles in chickenpox are unilocular, whilst in smallpox they are multilocular. The practical result of this pathological fact is that if a chickenpox vesicle be pricked with a needle, its contents can be completely evacuated and the cell will collapse, whereas in smallpox if one makes twenty pricks with a needle the vesicle will not collapse, because, being multilocular, it is

impossible to empty it. There are, of course, many other points of difference between the two; indeed, smallpox is only likely to be mistaken for the less serious malady when the practitioner is not alive to the possibility of a mistake in the diagnosis. In smallpox, even in its modified form, varioloid, the initial constitutional symptoms are early and well marked, with a considerable rise of temperature and cerebral disturbance. In smallpox the eruption is most abundant on the face and limbs, whereas in chickenpox it is most abundant on the trunk and its distribution is more discrete and general. Moreover, in chickenpox the eruption appears in crops and not, as in smallpox, within a few hours of the first appearance of papules. Then, too, there is the characteristic fall of temperature on the appearance of the vesicles. An absolutely characteristic feature of chickenpox is the appearance on the body of vesicles of different degrees of evolution, some being fully matured while others have just made their appearance. In spite of these usually very distinctive features, cases now and then occur in which even the most experienced may hesitate to formulate a definite opinion. In such cases twenty-four hours' observation will almost invariably clear up the mystery and allow of a correct diagnosis.—*Medical Press and Circular.*

CONCERNING SYPHILIS OF THE LIVER.

Although syphilis of the liver is not an infrequent occurrence, comparatively little has been written on the clinical aspects of the subject. The author gives a short resumé of the history of this affection and some of the literature dealing with it.

He divides syphilis of the liver clinically into three groups:

1. Gummata of the liver.
2. Syphilitic cirrhosis of the liver.
3. Syphilitic affections of the liver (including groups one and two), with icterus.

The latter can be either acute or chronic.

Of the first class the author reports four cases. In all these there was marked enlargement of the liver characterized by nodules of various sizes. Antiluetic treatment brought about complete cures, anatomical and clinical.

Of the third class ten cases are presented with the same satisfactory results following anti-syphilitic treatment.

The symptoms of syphilis of the liver are pain in the

right hypochondrium, sometimes constant, sometimes paroxysmal. If paroxysmal, the attacks may resemble gall-stone colics. In nearly every case there are digestive disturbances, such as loss of appetite, eructation, constipation, etc. There is loss of weight, though not usually so rapid or so marked as in cases of malignant growths of this organ. Icterus may be acute or chronic, and in the latter cases are nearly always due to pressure on the common duct. The liver itself is always more or less enlarged; if due to gummata the surface is very uneven; if due to cirrhosis the organ is simply enlarged. Enlargement of the spleen is not constant. Ascites occurs in the later stages.

It is not possible to differentiate between malignant tumours of the liver and gummata by the consistence. If the disease has continued for a year or two without great loss of weight, and if there is any history of lues, the resistance may be attributed to this cause.

An increase of the eosinophyle cell speaks for syphilis. Care must be taken not to confound the diffuse syphilitic enlargement of the liver with the hypertrophic cirrhosis due to alcoholism. In the former, there is usually a history of syphilis and luetic manifestations on the body. The anti-luetic treatment acts promptly.

The chief point in treatment is the free use of the iodides, gradually increased from two to five grammes, for a period of several months.—Einhorn (*Archiv fuer Verdauungskrankheiten*, vol. viii, part 3).—*Interstate Medical Journal.*

THE CLASSIFICATION OF CHRONIC NEPHRITIS.

No serious attempt has ever been made to classify cases of chronic nephritis from the standpoint of etiology. Morbid anatomists and pathologists are far from unanimous in their descriptions of the various types or groups of this disease. And physicians are not always able to make a differentiation that is satisfactory from the clinical point of view, or that holds good in the light of post-mortem revelations. Yet it is important that we have some working classification, even though it be somewhat faulty and largely artificial.

The classification that seems the best is practically that of Senator. It is one that appeals to the clinician as well as to the morbid anatomist. The term "parenchymatous" can be used in place of "diffuse without induration," because, though not literally expressive of the true condition, which is more or less diffuse, it recognizes what is

true, that in this form the parenchymal changes predominate; they are quantitatively greater than in the second variety, where the process, while diffuse, produces chiefly interstitial or stromal changes with resulting induration. The classification would be as follows:

1. Chronic parenchymatous nephritis. (Chronic diffuse nephritis without induration).

2. Chronic interstitial nephritis. (Chronic diffuse nephritis with induration).

(*a*) Primary chronic interstitial nephritis.

(*b*) Secondary chronic interstitial nephritis.

(*c*) Arterio-sclerotic kidney. (Arterio-sclerotic interstitial nephritis).

3. Mixed type—*i. e.*, a combination of 1 and 2.—JAMES B. HERRICK (*Jour. of Am. Med. Ass.*, October 4, 1902).—*Interstate Medical Journal.*

SURGERY.

IN CHARGE OF

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ON THE AVOIDANCE OF SHOCK IN MAJOR AMPUTATIONS BY COCAINIZATION OF LARGE NERVE TRUNKS PRELIMINARY TO THEIR DIVISION.

The diminution of arterial tension is the characteristic feature of shock, and while slight injuries to an extremity cause an increase in said tension, very severe ones cause a decrease of the same. When a certain amount of shock already exists, there is especial danger in the division of sensory nerve trunks. Cocaine injection, by blocking the centripetal influences, effectually keeps down shock from this source. In one case described by the author the pulse jumped from 110 to 150 upon the division of the brachial plexus, no cocaine being used. In a second, where the same thing was done after the drug had been introduced, there was absolutely no shock. When peripheral mixed nerves are put on a stretch there is an acceleration of cardiac rhythm, indicative of a reflex pressor effect. However, this may be followed by lowering of pressure if

the trauma be too extensive. In extensive traumata to extremities the author advises other and early operation (with cocaine as above) to rid the patient of the influences which tend to increase the already existing shock. Arterial tension cannot be judged by the finger on the pulse, but an instrument has been devised for the purpose. There are appended several charts which show the variance of the blood pressure during operations.—Cushing (*Annals of Surgery*, September, 1902).

CASES IN HAEMATHERAPY FROM SOUND VIEW HOSPITAL.

By T. J. Biggs, M. D., Stamford, Conn.

Case I. Skin-grafting with callus shavings in blood.

Mary M., age 60 years, Irish. Diagnosis, ulcer of leg. Patient admitted to Hospital March 3, 1902. She had a large varicose ulcer situated over the tibia, about $3\frac{1}{2}$ by 2 inches. This condition had existed for nine years, and during that time in spite of all treatment employed had never entirely healed. It had been skin-grafted in the old way, three times unsuccessfully. At the time of entering the hospital the patient suffered so severely from pain that at times she would cry out. She was put to bed, secretions regulated, the ulcer cleaned up by means of a dermal curette, and dressed for the first twenty-four hours with a Thiersch pack. On the morning of March 5, after the surface had been thoroughly cleaned up, a bovinine pure pack was applied and kept wet with the bovinine for twenty-four hours.

On the morning of the 7th I determined to employ grafts secured from a callus on the small toe, in order to demonstrate the technique of this mode of skin-grafting to five visiting physicians. The mode of procedure was as follows: The callus was thoroughly scrubbed up, and the external layers scraped off. Then thin sections of the layers next to the true skin were obtained by means of a very keen razor. Nine of these were deposited on the ulcerous surface. Over these were laid strips of perforated rubber tissue, then strips of plain bi-sterilized gauze saturated in bovinine, and a bandage applied. The nurse was instructed to keep the dressings wet with bovinine-pure. This dressing was removed on the 14th, and it was found, much to the delight and astonishment of the visiting physicians, that out of the nine grafts employed eight

were firmly adherent and in a healthy growing condition. The ninth had become displaced and was removed. The wound was now dressed with bovinine pure; the dressings being kept wet, and changed once in twenty-four hours. Coincident with the local dressings, from the outset the patient had been given a wineglassful of bovinine in milk alternating with wine and beer every three hours. On March 24 she was discharged cured, the entire surface having become covered with new healthy skin.

This experiment has been employed frequently enough by me to demonstrate that where the technique is carefully followed it will in the majority of cases yield the most gratifying results. A point of interest in this case and a usual one, is that from the day of the first dressing of the bovinine up to the time the patient was discharged, she was relieved of all pain.

CASE II. SKIN-GRAFTING WITH SKIN-SCRAPINGS IN BLOOD.

Anna H., age 12 years, American. Diagnosis, burn of right hand. Patient was admitted to hospital March 8, 1902. As a result of the burn she had on the back of her hand an ulcerous surface 2 by $1\frac{3}{4}$ inches, very painful, and in spite of three months' treatment had refused to heal. It was impossible in this case to secure skin-grafts, and as I wished to demonstrate to the visiting physicians who were present the efficacy of *skin-scrapings* as a means of bringing about a rapid healing of small surfaces where grafts could not be obtained, with an ordinary vaccinating comb I secured skin scrapings from the little patient's arms, legs and back. These were deposited within the periphery and dressed as in the other case. The dressing was kept wet with bovinine pure until the morning of the 16th, at which time it was removed, and to the delight of the visiting physicians as before, the surface was found to be almost entirely healed, there remaining unhealed only a small space about the size of a ten cent piece, in the center. The wound was now dressed with bovinine pure and the nurse ordered to change it every 24 hours. Internally the patient has been getting a teaspoonful of bovinine every two hours in peptonized milk. March 24 she was discharged cured.

CASE III. SKIN GRAFTS HEALED IN 6 DAYS WITH BLOOD.

Arnold L., age 24 years, German. Diagnosis, wound of the left cheek, the result of being thrown from a street car. Patient admitted to hospital March 10, 1902. The

wound was filled with gravel and dirt, and involved almost the entire side of the face. A space in the center of the cheek, 2 by 1½ inches, was completely denuded of skin. In this case, it being desirable to have the wound heal rapidly and with no evidence of scar, I determined to use grafts of normal skin sufficiently large to entirely cover the denuded surface. These grafts were secured from the patient's arms. The wound was dressed as in the other cases, the dressing being kept wet with bovinine. March 17 the dressing was removed, and the wound was entirely healed, leaving no evidence of a scar whatever; but around the periphery there was some decided redness. This is probably the most rapid case of healing of this class on record.

CASE V. GREAT 12-YEAR OLD ULCER HEALED WITH APPLIED BLOOD, WITHOUT SKIN-GRAFTING.

Mike L., age 57, Irish. Diagnosis, ulcer of left leg. Admitted to hospital March 3, 1902. This condition was of about 12 years' standing, and during that time had never entirely healed. He had been treated at various hospitals and at various clinics and by private physicians, but said that he got no special relief. The ulcer was a large one situated on the calf of the leg, being 4 by 3¾ inches. It was covered with unhealthy granulations which exuded a foul-smelling purulent discharge. The surface of the ulcer was thoroughly cleaned up with a dermal curette, and dressed with a wet Thiersch pack. This was kept wet and not changed in 24 hours. At the end of the 24 hours this dressing was removed, the wound thoroughly cleansed with bovinine and hydrozone reaction, followed by Thiersch irrigation, and dressed with bovinine pure. The bovinine dressings were changed twice in 24 hours, and the patient got a wineglassful of bovinine internally, every three hours. March 23 the ulcer had healed with the exception of a small space at the upper periphery. This was touched up with a 25 per cent. solution of pyrozone, and dressed with bovinine-pure, the dressings being renewed twice in 24 hours. March 30 the patient was discharged cured, the ulcer having become covered with healthy skin, and no scar tissue, it being almost impossible to tell it from the surrounding skin, the only difference being that it was a little redder.

CASE VI. VIOLENT ENDOMETRITIS CURED BY APPLIED BLOOD, WITHOUT CURETTAGE.

Florence B., age 30 years; American. Diagnosis, endometritis. Patient admitted to hospital March 2, 1902.

She was greatly anaemic and emaciated. Was so weak that she had to be carried from the carriage to her bed. Discharge was so profuse that unless proper appliances were used it would run from her almost constantly.

This condition had existed for four years, and during that period she had been twice curetted, but no result or relief obtained. Examination revealed the uterus to be in a highly diseased condition. So much so that I advocated a vaginal hysterectomy, or at least a thorough curettement. To these propositions both the patient and her friends absolutely declined to agree, and begged that I employ some other treatment. I, therefore, without any promise of result, determined to employ bovinine injections and applications. On the 3rd March, after the patient's secretions had been regulated, I commenced treatment by washing out the uterus and injecting the solution of bovinine and salt water, two-thirds bovinine and one-third salt water, and tamponing the vagina with bovinine-pure. Internally she was given two teaspoonsful of bovinine every hour in peptonized milk and a little water. The vaginal injections and tamponing were employed twice in 24 hours, up to March 14. At this time the discharge had entirely ceased and the uterus was becoming smaller. The uterine washings now were employed once in 24 hours and, instead of bovinine tamponings, vaginal injections of the bovinine pure. Internally, the bovinine was increased to a wineglassful every two hours. March 18 the patient was up, and went for a short walk, and returned in splendid condition. Had gained $4\frac{3}{4}$ pounds in weight. On March 23, the uterine injections were discontinued, and the vaginal injections employed once in 24 hours. At this time the uterus had assumed its normal size, and all evidence of inflammation had disappeared. The patient was looking and feeling splendidly, therefore local treatment was discontinued. April 1 she was discharged cured, but instructed to return at intervals for examination and continue the bovinine internally indefinitely.

This case was certainly an extreme one and by all gynaeclogists an operation would have been deemed, I think, an absolute necessity.

GONORRHEAL ARTHRITIS.

Jacobson gives a clinical lecture on this subject. The chief points in diagnosis are classified: (1) *Age*. Gonorrheal arthritis is chiefly met with between twenty and forty. It may occur in infants with gonorrheal conjunctivitis. (2) *Sex*. It is more common in males. This is prob-

ably explained by the numerous glandular recesses of the male urethra, which are reached by the gonococci. The disease is, however, not uncommon in women. (3) *Time of Onset.* Arthritis may sometimes occur early in the disease, but usually not for several weeks. The late appearance may be explained by the gonococci having had time to reach the posterior urethra and its annexes. Lorimer, from an examination of 250 cases, found the average interval in men six weeks, in women three months. (4) *Joints attacked.* These are usually the knee, ankle, elbow, wrist and shoulder. Arthritis with effusion generally attacks the knee, ankle and shoulder, the phlegmonous and peri-articular form the wrist and elbow. But any joint may be attacked, some of them out-of-the-way ones, such as the tempero-mandibular, sacro-iliac, etc. An ankylosed joint and wasted muscles of unexplained origin suggests a past gonorrheal arthritis. The arthritis is usually monarticular. When polyarticular, symmetrical joints are usually attacked. If several joints appear to be acutely attacked the disease soon settles in one and the rest clear up. (5) *Fever, Pain and Inflammation.* There are three types—the acute, subacute and chronic. The latter are more common. As a rule, the symptoms are less intense than in rheumatic fever. Swelling, redness and edema vary with the variety of the arthritis, swelling being greatest in hydrarthrosis, and redness and edema when the disease is mainly capsular and peri-capsular. (6) *The Discharge.* In many cases it is difficult to determine the existence of a discharge, especially in women. In men the arthritis usually occurs with a gleety discharge. The long vitality and latency of gonococci must be borne in mind. Neisser found them present in 80 cases of chronic gonorrhea; in 18 they had lasted over a year, and in 10 cases over two years. The cocci may easily be excited into activity by alcohol, excess of coitus, menstruation, pregnancy and curetting the uterus. In cases of discharge, due to other causes than the gonococci, joint complications do not occur, except in case pyemia occurs.

Diagnosis.—(1) *Acute Rheumatism.* In this there is more pain and fever than in gonorrheal arthritis. In gonorrheal arthritis the disease usually settles in one joint, and never becomes general as in rheumatism. Salicylates do not act in gonorrheal arthritis. In the latter there is no peculiar odour in the sweat, and cardiac complications are rare. (2) *Cellulitis.* The phlegmonous and peri-capsular forms may be mistaken for cellulitis, but the former begins about a joint, usually the elbow or wrist, and the severity

is less marked. (3) *Gout.* The joints attacked are usually different. A urethral discharge may occur in gout, but is rare.

Prognosis.—This depends to a great extent on the patient. Any lighting up of the discharge is likely to be followed by fresh joint troubles, and these are likely to be worse than the first. The vitality of the patient is important. A patient out of work, compelled to get about with his ankles and plantar fascia attacked, is a bad case to cure. The duration of the arthritis is an important factor.

Treatment.—The main points are: (1) Cure the discharge; (2) use fixation and supporting pressure to the joint by putting up in plaster of Paris. In acute cases it may be necessary to treat with fomentations or ice for a few days. When there is much effusion the joint should be aspirated before applying the plaster. In two or three days' time, when the pain has gone, the plaster should be reapplied or an india-rubber bandage applied over cotton-wool. If the feet are chiefly affected, it is important for the patient to get about a little, and a Martin's bandage is best used. When the plantar fascia is attacked, it is liable to soften and cause flat-foot. In such cases rest off the feet is necessary. After a week or ten days the joint should be ready for passive movements, friction, douches, massage and the Tallerman hot-air treatment, in order to prevent ankylosis. The liability to this is increased by prolonged fixation. The general health should be improved and a nutritious diet given. Salicylates and iodides are, in the author's opinion, useless, but iron and cod liver oil may be given.—Dr. Jacobson in *Guy's Hospital Gaz.*, Ref., *London Treatment.*

THE TREATMENT OF VENEREAL DISEASES IN DISPENSARY PRACTICE.

The writer gives a brief statistical study of the venereal diseases taken from the case-books of the genito-urinary dispensary of the University Hospital of Pennsylvania. In all, these include a study of 6,587 cases of genito-urinary disorders. Of this number 4,890 belong to the class of venereal diseases, of which there were: gonorrhoea, 1,240; chronic anterior urethritis, 449; chronic posterior urethritis, 253; stricture, 420; chancroid, 452; chancre, 440; secondary syphilis, 479; tertiary syphilis, 157.

Gonorrhoea is more scientifically treated than formerly, the patients being thereby saved considerable

discomfort. The shortening of the disease, the aim of most of the newer methods of treatment, has not been accomplished. An investigation of the case-books shows that in the majority of instances gonorrhoea in dispensary practice is quite as protracted now as it was ten years ago.

In the treatment of gonorrhoea, about all the newer methods of the last ten years have been tried in the dispensary, but it has finally settled down to the following simple plan: During the first ten days or two weeks the patient is given two solutions for injection. The first is composed of permanganate of potassium, one-half grain to eight ounces of water. With this the patient is directed to flush the urethra with an ordinary hand syringe, which is filled six times, the procedure to be employed thrice daily. This is followed by a solution of protargol, ten grains to four ounces, which is injected into the urethra and retained for ten minutes. At the end of four days the permanganate is increased to a strength of 1-to-4,000, and the protargol to 20 grains to 4 ounces. After the second and third week a favourite prescription is:

℞ Zinc sulphate. . . . . 10 grains
Bismuth subcarbonate. . . . . 2 grammes
Solution of hydrastis (colourless). . . 1-2 ounce
Water to make. . . . . 4 ounces

At the same time copaiba and oil of sandalwood are always given. Under this routine treatment the majority of acute cases get well in from six to seven weeks.

In cases of chronic urethritis where the disease depends upon stricture or granular patches, sounds are passed three times a week, followed by an irrigation of silver nitrate, beginning with a solution of 1-to-8,000, which is gradually increased to 1-to-1,000. In cases of chronic folliculitis, involving the glands along the urethra, a sound is introduced, covered with an ointment containing iodine and iodide of potassium. Chronic posterior urethritis is treated by massage of the prostate and irrigations of the urethra, with deep instillations of protargol. Three per cent. sulphate of copper and one and two per cent. nitrate of silver are of value in chronic disorders of the deep urethra.

Chancroids, where there is no question as to the diagnosis, are cauterized with nitric acid. The patient uses a dusting powder of iodoform two parts and acetanilid one part. As a substitute for iodoform, bismuth formic iodide powder has been used. Powdered chloretone is useful where there is pain.

The initial lesion of syphilis is kept clean, and as free from irritation as possible. It is washed with a 50 per

cent. solution of peroxide of hydrogen twice daily, followed by a dusting powder of acetanilid and iodine in equal parts. No constitutional treatment is instituted until secondary acute manifestations occur.

Constitutional syphilis is divided for treatment into two classes, the benign cases and the more severe form. To the former is given proto-iodide, one-third grain in pill form, three to four times a day. This treatment is continued for eighteen months. In the more severe cases increasing doses are given, until the gums are inflamed, or there is decided fetor of the breath. The number of pills requisite to bring about this condition is divided by two, the result being the dose which is to be administered to that patient. When mercury by the mouth is not assimilated, inunctions of mercury are employed. In tertiary syphilis mercury is always employed in conjunction with potassium iodide.—H. M. Christian in *Therap. Gaz. Med.*

OPERATION FOR SIMPLE DEPRESSED FRACTURE OF SKULL WITH COMA IN A CHILD.

Mr. Battle, St. Thomas' Hospital, London, operated on a child, aet. 2 years 3 months, who had been admitted a few days before after a fall of 20 ft. from a window on to the pavement. The child had not recovered consciousness since the injury; her eyes were constantly rotated downwards and to the right; she moved the left arm and leg, but the right arm and the leg did not respond to stimulus, and were rigid. A depressed fracture could be felt over and behind the left motor area. As the coma appeared to be deepening, it was considered best to trephine in the hopes that some clot might be found, the removal of which would relieve pressure on the cerebral substance. A semicircular flap was raised and the skull trephined; the fracture was rather irregular, and there was not much depression. After the application of the trephine, a small quantity of clot was exposed on the surface of the dura mater, but it was insufficient to account for the symptoms. The opening in the skull was considerably enlarged by means of bone forceps, then an incision was made through the dura mater; there was no blood clot on the surface of the brain, nor did the cerebral substance look bruised; there was, however, an immediate and rapid flow of cerebrospinal fluid. It was not considered advisable to explore the brain, the symptoms being insufficiently localized to point to any one centre or connected group of centres. The flap was replaced, no attempt being made to restore the bone. A drainage tube was left in the wound in order

that if any cerebro-spinal fluid continued to escape it might come away easily. Mr. Battle said that this was evidently a case in which there was probably contusion and laceration on the surface of the brain, in which the continued condition of coma was associated with excessive secretion of cerebro-spinal fluid, and, possibly, a progressive oedema of the brain in the neighbourhood of the injured portion. The depression of the skull was not regarded as a sufficient cause for the symtoms, the bone was not much depressed, and it extended over a fairly large area.

The result of the operation was very satisfactory, the patient being able to sit up in bed and take a penny with either hand within a week. For two days there was a discharge of cerebro-spinal fluid, and for some days the head was kept somewhat raised, and the child lying on her right side so as to gradually diminish the tendency to overflow from the wound. Mr. Battle said he considered the whole case interesting from the duration of the coma and from the rapidity of improvement after the operation. Bearing on the question of rapidity of recovery he mentioned a case that had been under his care some years ago:—

A boy who had been operated on for compound comminuted fracture of his frontal bone suddenly developed coma with left hemiplegia about eight days afterwards. The patient was taken to the operating theatre, and without need for an anaesthetic the right side of the brain was explored in all directions with a trocar and cannula, but no abnormal condition was discovered. It was thought that his state was a hopeless one, but next day he had recovered consciousness and spirits, and when the house surgeon went round in the morning the patient insisted on sitting up in bed and shaking hands with him, and there was no trace of paralysis left, and he left the hospital a short time afterwards perfectly well.—*Dublin Medical Press.*

THE INJURY TO THE YOUNG CELLS CAUSED BY THE COMMON SURGICAL DRESSINGS.

Robert T. Morris says that absorbent cotton is perhaps the most injurious of the dressing materials that are placed near the wound. Absorbent gauze and gutta percha tissue are harmful, and the various antiseptics used, while they may destroy pus, have also the power of destroying new epithelium and new connective tissue formations. Skilful neglect of wounds requires much experience. Lister's protective oil silk is one of the best dressings to lie next to the wound; an innocuous and valuable dressing for the

wound surface can be made by pouring collodion upon glass and peeling it off in a thin film after evaporation of the volatile part. Silver foil is becoming popular as a protective dressing. A dressing presented by the author is known as the Cargile membrane, first suggested by Dr. Cargile, of Arkansas, for the purpose of preventing the formation of peritoneal adhesions. The material, described in a recent issue of the *Medical Record*, is a very thin gold-beaters' skin, made from the peritoneum of the ox. It is pervious to moisture, and at the same time it does not entangle new cells. Its presence, as in animal membrane, seems particularly grateful to the tissues, and the author has not yet found a dressing that has been found so satisfactory as this material to lie next the wound. "Sulphite laps" is the best and cheapest absorbent dressing to be found, but as yet is not obtainable in the market. The combination of Cargile membrane and sulphite laps ought to become a popular one.—*Mobile Medical and Surgical Journal.*

PREVENTION OF STITCH ABSCESS.

Maylard (*Annals of Surgery*, January, 1902) holds that in the practice of modern operative surgery there are two, and probably only two, precautions where doubt must always exist as to the certainty on which a perfectly aseptic result may be expected. These two precautions deal with (1) the condition of the surgeon's hands, and (2) the condition of the parts to be operated upon, or, in other words, the state of the skin and deeper tissue. Convinced by the results of experiments that infective micro-organsims are derived from the sudoriferous and sebaceous glands of the surgeon's hands, the author advocates a precaution founded on the physiological basis of exciting these glands of the skin to act freely before the commencement of the operation. In the method described in this paper the hands are submerged for from five to ten minutes in hot water as hot as can be conveniently borne. The soddened surface epithelium having been removed by massage of the hands under water and the use of ordinary soap the hands are finally rinsed in warm carbolic lotion (1 to 40). In the preparation of the operator's hands, "soaking," it is tersely asserted, "is better than soaping." The author's method of sterilizing the skin and deeper tissues of the patient is based on the fact that it is possible to salivate a patient by the inunction of the surface of the abdomen with mercurial ointment. Such a result proves that the agent applied is carried by natural

channels—certainly the lymphatics—so as to produce an effect upon a comparatively distant region elsewhere. So long as the agent is kept in contact with the skin so long will these channels be engaged in transmitting it to other parts. It is inferred that when an operation is performed on parts whose lymphatics contain such a potent bactericidal agent as mercury, this should not only prove destructive to any micro organisms with which it might come into direct contact, but its presence should still further render the normal tissue unfit for the multiplication and development of these bodies. The author describes only his method of prolonged application of lanoline-oleate of mercury ointment to the skin over the seat of operation, and states that according to the results of careful scientific and clinical investigation, whilst chemical examination failed to afford any positive information, bacteriological investigation proved a material diminution in the number of micro-organisms, and the records of actual practice afforded incontestable proof of the value of the method.—*Indian Lancet.*

SEVERE EXTRINSIC TRAUMATISMS OF THE SPINE.

BY THOMAS H. MANLEY, M. D., NEW YORK, N. Y.

Severe spinal injuries reduced to an anatomical basis may be divided into two classes:

1. Those which involve the rachidian structures alone, the osseous, ligamentous, muscular and vascular.

2. Those in which the effects of violence fall with greatest force on the central organ, the cord, its meningeal investments, its ganglia or medullary substance.

The former, or extrinsic injuries, are much the more common, and though not so serious to life or function, may, by extension of pathological processes, involve the deeper or more vital parts; but in most cases they are recovered from, however, sometimes leaving deformity or impaired function.

The osseous structures of the vertebral column consist essentially of two parts:

1. A segmented whole, made up of the vertebral bodies, with an intervertebral substance, and an enveloping sheath of a tough, fibrous structure.

This, properly speaking, is the triple curved backbone, which supports the head and carries the whole trunk. This is a flexible structure which, within various limits, may be bowed or twisted with remarkable impunity.

2. The posterior stage work of the spinal column. The

vertebral apophyses, which serve chiefly the double purpose of providing a hollow tube for the cord and attachments for ligaments, muscles and tendons.

All the structures external to the theca spinalis are provided with an abundant circulation, while the cord itself and its membranes are but very sparsely supplied with vessels.

The primary extrinsic lesions of the spine are:

1. Contusions, blows or falls.
2. Sprains, hyperflexion or torsion.
3. Hemorrhage, intra or extrarachidian.
4. Fractures—simple and open.
5. Diastases—fracture and luxations.
6. Visceral complications.

Contusions, blows or falls on the back seldom involve danger to the spinal structures, except when the volume of force is great and concentrated on a limited area. The spinal defenses provide frequent immunity by sudden sinking of the head, the projecting shoulders and ribs, the iliac crests, the ponderous lumbar development and gluteal projections. A sudden violent blow over the neck is the most serious, because of the large sympathetic ganglia here located and its contiguity with the bulb at the base of the brain.

The pneumatic, thoracic areas are well calculated to resist shock, and lower down, afford protection to many of the solid, floating organs of the abdomen.

The spinal cord ends at the last dorsal vertebra, and hence, concussive force on the lumbar or sacral regions can only affect the terminal nerve ganglia and cords contained therein.

The effect of a blow on the lumbar or sacral region is from direct concussion and *contre-coup* effects, transmitted shock.

Sprain of the spine implies the effects of a complex force, with consecutive conplex pathological conditions, entorse and arrachement; torsion with over-stretching or sundering of ligaments are invariably essential factors.

The neck, the most mobile segment, suffers most frequently, and grave sprains there are most commonly produced by the body being projected against the occiput, as in diving, or falls on the side of the head. The costal bases, which laterally support the thoracic spine, safeguard this segment against torsion injury. The lumbar region frequently suffers from sprains after great effort in various exercises, or in making heavy lifts with the spine in a laterally inclined attitude.

A severe sprain of a joint is always a serious accident; of the spine more so, because of vital and delicate organs which it encases. Spinal sprains may involve a diastasis of the vertebral segments, though generally the apophyseal articulations alone are engaged. In lumbar sprains the tendons may suffer rupture or luxation. Spinal hemorrhage may be broadly divided into two varieties, viz., that which occupies the cord and that which occurs external to the theca in any of the overlying structures. The former can never occur, as a primary, uncomplicated lesion; the latter, the extrinsic variety, occurs frequently in nearly every type of severe spinal injury; it is usually venous, it may take place in the vertebral hollow, along side the cord, or into the subcutaneous inter-muscular spaces, porterior to the apophyses.

The most confused ideas prevail in relation to "spinal hemorrhage," the prevailing impression being that the blood escapes into the meninges or the medullary elements of the cord (hematomeningea), while quite invariably the blood leak is into the spinal canal (hematorachis). The latter is of itself rarely a cause for serious apprehension, but when complicated it becomes an aggraving factor in provoking pathological changes, tending to meningitis, or myelitis, ascending or descending. The gravity of this hemorrhage depends on its site, volume and complications.

Fracture of the spine should always be considered in a category separate to itself. This fracture may exist—a broken back—without any definite symptoms at all. Diagnosis of it, by any means known to art, may at times be absolutely impossible. When the spinal cord escapes impingement, as it does in the greater number of cases, *restitutio ad integrum* may speedily follow, or the fragments may unite, leaving an anchylosis or a deviation, most commonly a kyphos. This involves a deformity with impairment of function in the mechanical action of the column, in its oscillatory movements and its strength, but in no manner impairing the function of the cord.

Fracture of the spine is seldom attended with palpable displacement, the ligamentous attachments being so numerous and firm that the fragments are usually sprung into position automatically. This fracture only assumes a serious aspect when the cord is divided.

Diastasis, or fracture-luxation: A genuine, complete luxation of the spine, without simultaneous destruction of the cord, can be only imagined, it can never occur.

A displaced vertebral body is a diastasis and not a

dislocation, because the intervertebral junctions are not true joints, and luxation of the apophyses can only occur with coexistent fracture of an arch or pedicle, except in the cervical region. It is very frequently impossible to distinguish an apophyseal luxation from a fracture, except, possibly, in the neck, and even here a luxation of the vertebrae has often been suspected, when on autopsy none was found, but a fracture of the base of the skull was discovered. Again, I have known of an exploratory operation for luxation—fracture when none was discerned through the incision, but it was later known that one existed, three vertebrae further down.

Visceral complications, coexistent or consecutive to violent spinal injuries, are not infrequent. The thoracic and abdominal organs most frequently suffer. Mediastinal, pleural or pulmonary hemorrhage may occur after a fracture through the vertebral blocks or a diastasis through the intervertebral substance, in consequence of a laceration of the anterior ligaments and intra-rachidian plexus of vessels. The heart or great vessels may suffer from the effects of violent commotion of the thorax.

In the abdomen the kidney may suffer displacement, contusion or laceration; the spleen, pancreas or liver are liable to similar lesions; a distended gall or urinary bladder, or stomach may suffer rupture and leakage; the pregnant uterus in any stage may sustain shock, with the premature expulsion of its contents.

In many severe extrinsic rachidian injuries, through the spinal cord may previously escape such damage as will induce paralysis, yet later symptoms may follow, suggestive of meningeal changes, or disturbances of nutrition, and pronounced disturbance of the ganglionic connections with the sympathetic involved.

In all this class of traumatisms it will be well to be reserved in prognosis until at least the primary effects have been recovered from and function is fully regained.—*Cincinnati Lancet-Clinic.*

RADICAL CURE OF HYDROCELE.

From a large experience of the value of two or three-drop injections of pure phenol into an emptied tunica vaginalis testis, Drs. Coley and Satterwhaite have been so pleased with the results they obtained that they recommend the use of phenol in small doses for the radical cure of hydrocele. Their procedure consists in the use of a double trocar and cannula, the inner trocar tightly fitting

and projecting slightly beyond the outer and bearing a thread at its proximal end, so that it can be attached to any ordinary hypodermic syringe. The inner cannula, being attached to the syringe, is first filled with liquid phenol, and two or three drops injected. Such a small quantity of phenol could not affect the whole of the surface of even a moderate-sized sac, but the sac of a hydrocele is never completely emptied by tapping, and the remaining fluid is quite sufficient, with the added phenol, to excite the necessary adhesive inflammation over the lining membrane of the tunic. The use of pure phenol in this disease is not new, but in the past it fell into disrepute from the untoward results that followed from its use in excessive quantities. But to the authors we are indebted for demonstrating its utility and safety in small doses.—*Med. Press and Circular.*

GUNSHOT WOUNDS.

In gunshot wounds, when a round ball, or a conical one with small velocity, penetrates a fascia, the fibres of the latter may be so disturbed and crowded aside as to interfere much with probing and with drainage. Thus a probe may impinge upon a fascia so that no further advance can be made, and errors as to the actual presence or the direction of the bullet may easily occur.—*International Journal of Surgery.*

Jottings.

A hot bath at bed time will relieve many cases of insomnia.

Remember that kerosene oil and vinegar are good household remedies for the removal of pediculi and their eggs.

Iodoform odour may be removed from the hands by thorough washing in vinegar after the use of soap and water.

A single drop of the wine of ipecac repeated every fifteen or twenty minutes, will often produce the most marked relief both from vomiting and diarrhœa.

Five to ten drops of the tincture of gelsemium every four hours will almost invariably relieve that painful condition or backache commonly called lumbago.

Freckled people will rejoice to know that freckles may be removed by the use of corrosive sublimate; two to five grains to the ounce of lotion or ointment.

A single dose of from ten to fifteen grains of salicylate of sodium will often cure acute supra-orbital pain. It is safe to give it in every case where blood poisoning is suspected.

Dr. H. B. Staney says.—"Never try to introduce a catheter into the bladder where the prostate gland is enlarged without having the finger in the rectum to spread the lateral lobes apart and lift the point of the instrument above the sinus pocularis."

Perforation of the intestine frequently threatens toward the end of an attack of typhoid fever, and great caution needs to be observed in allowing a return to indigestible food during early convalescence. A disregard of this caution may lead to a fatal issue on the very threshold of recovery.

OBSTETRICS.

IN CHARGE OF

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SUPRARENAL GLAND IN PRURITUS OF THE VULVA.

Two cases of pudendal irritation with marked pruritus are described. One, a young woman 18 years of age, ten days before coming under observation, was seized with a violent itching of the vulva and anus. Notwithstanding approved treatment there was no relief, and, in the meantime, the condition had become so severe that she was unable to leave the house. A local examination showed an intensely congested conditon of the vulva and the lower part of the vagina, with increased secretion. A strong solution of suprarenal was applied to the part, which was followed by a rapid blanching of the mucous membrane. Momentarily the itching was increased, and then gave way to a slight burning sensation, which passed off in a few minutes. The effects of this application lasted for fourteen hours, when the itching recurred. A second application gave permanent relief.—F. S. Meara.

LACERATION OF THE CERVIX A CAUSE OF ABORTION.

The experience of the writer confirms him in the belief that lacerations of the cervix particularly those which are of some depth, are a frequent cause of abortion. A primipara can usually give some cause for an abortion, such as a misstep or a fall, but in those who have previously borne children, where there is a fissure extending

as high as the internal os that will admit the tip of the index-finger, or the integrity of the lower uterine segments is lost, there is a predisposition to abortion.—R. W. Rogers.

USE OF THE X-RAY DURING PREGNANCY.

Bouchacourt has found the X-ray thoroughly unsatisfactory in its application to the study of the fetus *in utero*. He finds by his experiments that the factors which interfere with vision of the fetus include liquor amnii, membranes, uterine wall, respiratory and voluntary movements of the mother, movements of the fetus, opacity of the maternal pelvic and vertebral bones, inequality of distance of different portions of the uterus from the plate, and unequal thickness of different portions of the tissues traversed by the X-ray.

TREATMENT OF RETENTION OF PLACENTA.

S. Grosjean favours tamponing the uterus as the simplest and safest method of obtaining the expulsion of a retained placenta, unless one has had sufficient experience in digital curettage. By the means which he advocates, Grosjean has succeeded in emptying the uterus in twelve of thirteen cases. It also arrested the hemorrhage which accompanied six of the cases. The placenta was expelled, on an average, at the end of fifteen hours. In four cases renewal of the tampon once or twice after twenty-four hours was necessary. In one of these the method failed entirely, although the packing was inserted four times.

APPENDICITIS AND PREGNANCY.

A. Herrgott reports two cases of appendicitis during pregnancy which terminated fatally in spite of operative interference. He holds that operation is demanded not only for all cases of appendicitis during pregnancy, but also upon all women having appendicitis who are susceptible of becoming pregnant. During labour the adhesions limiting the process are broken, infection becomes general, and the condition for treatment becomes very unfavourable.

NAUSEA AND VOMITING OF PREGNANCY.

J. M. Batten, after trying all the different drugs recommended for this trouble, has come to the conclusion that they are of no value. He has found that over feeding generally gives relief. Before rising the patient should have a hearty breakfast, and three other full meals during

the day. She should also have food near her bed at night, so that she may have something to eat if hungry. Fasting during the night is conducive to sickness in the morning, and possibly during the ensuing day.

MOLECULAR CONCENTRATION OF THE BLOOD IN ECLAMPSIA.

The examination of the blood of six cases of eclampsia leads A. Szili to the conclusion that the freezing point of eclamptic blood is practically the same as that of normal blood, a point which is almost constant. This he takes as showing that the permeability of the kidneys is not altered in the same way in eclampsia as in most uremic processes. He accordingly deduces the hypothesis that the supposed toxic substance which is the etiological factor of eclampsia is a complex molecule, perhaps an intermediate product of katabolic changes in the albumin molecule.

POINTS IN OBSTETRICS.

Hammamelis is valuable in the varicose veins and hemmorrhoids of pregnancy. Use locally and internally to full limit.

In threatened mastitis, use every effort to abort the abscess, both for cosmetic reasons and because a breast is never again so good a milk producer after it has once healed. Internally: give calcium sulfid, saline laxatives, and belladonna. Locally: apply belladonna, tincture of opium and lead water, and alternate this with tincture of opium, one ounce to ½ point of sweet oil, applied hot and rubbed in well with gentle massage. Keep the breast under firm pressure at all times except when making applications. If pus form, evacuate promptly at lower part of gland; use an anesthetic so that all pus pockets may be searched out and thoroughly drained.

Never rupture the membranes in a primapara; and never rupture them in multipara till the second stage is well advanced.

Hirst prefers ether to chloroform in labour except in the presence of eclamptic symptoms.

Fifteen grains of chloral by the rectum, repeated once or twice, will mollify the early stages of labour.

It is good practice to give a dram of fluid extract of ergot as soon as the child is delivered. Before the ergot has had time to act the placenta will have been expelled or delivered, and danger of postpartum hemorrhage is averted.

While oxalic acid is one of the best emenagogs, one

must beware of using it in pregnancy, since it is a powerful oxytoxic and may easily induce abortion.

Never use the forceps in a normal labour till the head has been stationary for two hours. Never use them for no better excuse than to hasten the labour.

If the fetal vessels cease to beat for 10 minutes previous to delivery, it may be certain that the child is dead.

If a woman dies suddenly in full term labour, extract the child immediately by version or Caeian section.

Scale pepsin added to quinine will prevent vomiting, when given during labour in the enormous doses necessary to get the effect on the uterus.—*Medical World.*

AN EXPERIMENTAL STUDY OF THE URINARY ANTISEPTICS.

The writer has made a comparative study of the different antiseptics which are given internally for the purpose of rendering the urinary tract sterile. Some of these experiments were directed to ascertain the effect of the different substances upon urine which contained bacteria, or when the bacteria were added to urine which was aseptic. Of all the urinary antiseptics, urotropin was found to be the most efficient. In doses of sixty grains daily, the urine had a distinct antiseptic action upon micro-organism, whether contained in the bladder or added to the urine. Next to urotropin, salicylic acid was the most efficient. Sandalwood oil, methylene blue, salol, balsam of copaiba, had a distinct antiseptic action. Chloride of potassium, boric acid, and uva ursi had no appreciable action.—O. Sachs.—*Wiener Klin Wochen.*

TREATMENT OF PHLEGMASIA ALBA DOLENS.

M. T. Brennan claims to have obtained excellent results from the application of solutions of picric acid. He believes that this relieves the pain and swelling more rapidly than any other agent. He employs a saturated alcoholic solution and renews the dressings two or three times a day. An aqueous solution is used if the skin is injured or tender.

PRECOCIOUS MATERNITY.

Dr. Allen reports the pregnancy and parturition of a coloured girl aged eleven years, eight months, in the *Maryland Medical Journal.* Menstruation began at ten years, three months. Her child, of normal size, was born at term without complications. Both mother and child are now perfectly well.

THE

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Editorial.

COLLEGE OF PHYSICIANS AND SURGEONS, PROVINCE OF QUEBEC.

The half-yearly meeting of the above body, which is the Provincial Licensing Board of this Province, was held in the City of Quebec on the 24th of September. Two resolutions which were passed have given rise to considerable discussion in the daily papers of Montreal, and, to a certain extent, in those of Quebec. The first was a resolution, the result of a report presented by the Educational Committee—which report we know had received but little if any consideration from the English-speaking members of the Committee. This Committee met only a few minutes before the hour named for the opening of the College, and on the subject being brought before it, in the shape of a resolution, it was vigorously opposed by the two English members, Drs. Craik and McConnell. Time pressing, it was decided to bring the matter before the College and further discuss it there. This resolution declared that in future all who desired to present themselves for the Preliminary Examination of the College must produce evidence of having taken a *cours complet*. A vigorous protest against

it was made by all the English-speaking members—Dr. Craik said that such a resolution would act most injuriously on candidates of English origin, as the Protestant community had no such institutions, as had their Roman Catholic confrères—scattered all over the Province, and where education was received at a yearly cost of about one hundred and thirty dollars. For Protestants to take a somewhat similar course would cost from three to four hundred dollars a year, and, practically, meant the candidate taking the degree of B. A. While such a degree was desirable for these entering the Medical profession, the country, he felt sure, was as yet not prepared for it. Dr. F.W.Campbell took broader ground and opposed the resolution, because, while the College had every right to specify what examinations a candidate must pass, it had no right to specify by what means he must get the required education. Those who favoured the resolution said the object desired to be obtained by it was to have the candidates well grounded in the various subjects of the examination, and not permit them to cram for it by a tutor. Dr. Campbell met this by stating that during the twelve years he was secretary of the College, he knew that nearly every one who had taken a *cours complet* had found it necessary to employ a tutor before going up for the Medical Preliminary. This fact, and the additional fact that the number of rejections was, in his opinion, far beyond what they should have been, led him to try and find out, if possible, the cause. With this end in view he succeeded in getting a meeting of a large number of the heads of Roman Catholic and Protestant educational institutions in this Province. It took place in the City of Montreal, and the matter was freely and fully discussed.

The decision arrived at was that there was not a single institution in Quebec which gave an education which prepared a young man for the entrance examination in medicine. Dr. Campbell declared that, under such circumstances, to pass such a resolution was unfair to Roman

Catholics, and most unjust to Protestants. On the part of those of the Educational Committee, who passed the resolution, it is but fair to state that they avowed no desire to act unjustly toward the English-speaking community, and expressed a perfect willingness to accept as equivalent to a *cours complet*, the certificate of any College, High School or Academy, which gave a classical education, and was recommended by the English-speaking members of the College. Dr. Campbell still pressed his objection, affirming that several men occupying excellent professional positions, had, to his knowledge, been self-taught. Notwithstanding the earnest objection of the English-speaking members, the resolution was passed by a strictly national vote. This is, of course, not final, as the subject must come before the Legislature for adoption, when we know it will be strenuously opposed. In this connection we may say that many eminent men in the profession to-day oppose a classical education as being necessary for a medical man. Sir John Williams of the University College of South Wales is one of these, and the *Dublin Medical Press* in noticing his utterance says: "We are pleased that one occupying so conspicuous a place in the profession should have raised his voice against an indefensible adherence to an anachronistic system of education."

The next serious question which came before the College was the consideration of the Roddick Bill. A resolution in favour of it was negatived by a vote of 21 to 11. The minority would have stood at 13 if Drs. Lafleur and McConnell had not left for Montreal before the vote was taken. A second resolution opposing the Bill and directing the College to oppose any attempt to introduce into the Legislature the necessary measure for its adoption was carried by the same vote: 21 to 11. Several of the French-speaking members spoke in favour of it, but the great majority were fiercely opposed. In our opinion they failed to bring forward a single sound argument against it. We notice that since the meeting, the President of the College, accord-

ing to one or more of the Montreal papers, affirms that when the Governors of the College have had time to give the Bill full consideration, they most likely will give it their support. This, in our opinion, is begging the question. The College is presumed to be a body of intelligent physicians, and to say they require more time for consideration is absurd. It is six years since Dr. Roddick first introduced his Bill before the Dominion Parliament, and six months since it was passed. It has been discussed by every medical journal in, and by most of the newspaper press, of Canada. Nearly every member of the profession in the Dominion has received a copy of the Bill. Ample time for its consideration has been given, and the vote in the College of Physicians and Surgeons was the result of that consideration. We are informed that notwithstanding this adverse vote, it is Dr. Roddick's intention to proceed, as soon as the Quebec Legislature opens, with the necessary measure, to put his Act in operation. Moreover, we believe that he will succeed, for promises of support have been given him from very strong quarters. Possibly, the Quebec College of Physicians and Surgeons may learn that it were better if its members were more modern and up to date in their views. In many ways we feel that they have much to learn, and if they are wise they will commence the necessary education forthwith.

AN OBJECT LESSON IN SANITATION.

We have, at least once before, written on the wonderful results of sanitation, which have taken place in Havana, since its occupation by American troops, and which still continues under the same direction although the great bulk of the troops have been withdrawn and Cuba started on its own lines as a republic. Certainly the transformation has been marvellous and should be an object lesson to the whole world.

One of the greatest achievements is the very marked reduction in the mortality of the island, and especially

in the city of Havana. First in importance in this connection is the almost absolute eradication of yellow fever, which formerly played so important a part in making Cuba's cities places to which capital and people feared to go. Investigations leading to the discovery of the part played by the mosquito in the transmission of yellow fever, were made with the Cuban funds, under the direction of the military government, on the lines indicated by it. As a result of these investigations, Cuba has been practically free from yellow fever during the past year. The few cas s which occurred were readily controlled, and the disease did not spread. A systematic vaccination of the entire people is being carried on from month to month, while a campaign against glanders, which has been very prevalent throughout the island, has been brought to a successful conclusion, the government reimbursing the owners of afflicted animals to the extent of 50 per cent. of the estimated value. This plan elicited the hearty co-operation of the people with the government, thereby making possible the results accomplished. The medical authorities are now devoting themselves to the control of tuberculosis, and are preparing a sanatorium near Havana for that purpose. All hospitals are fitted with wards for the treatment of tuberculous patients, and the campaign against this disease is being carried on in a thoroughly effective manner. The result of this work has demonstrated that the island is a healthy and safe residence for Anglo-Saxons. A large part of the credit for this sanitary reformation is due to Major W. C. Gorges, Surgeon United States Army, who is the Chief Sanitary Officer of Havana. In a private letter to Major Ronald Ross (quoted by the *British Medical Journal*), Major Gorges says: "The work here has been much more successful than I had hoped when we started. There seemed to me very little prospect for accomplishing much when we commenced in February of 1901, but as you will see from our reports, our results have been most positive. For the first time since the English occupation, 1762, we have had an October free from yellow fever, and malaria decreased more than one-half. Mr. Le Prince, directly in charge of mosquito work,

estimates that mosquitoes have been decreased 90 per cent. by the work, as compared with this time last year. Of course this is a difficult statement to substantiate; it is a matter so much of individual opinion. But I have convinced myself that they have been greatly decreased. My own quarters on the bay front, where they have always been very bad, have had none practically for the last six months; and I know many other localities where similar positive statements can be made. But this is certain, that last October we had seventy-four deaths from yellow fever; this year no deaths and no cases; and from malarial fever, last year twenty-five deaths; this year nineteen. This, I am convinced, is entirely due to the mosquito work. The disappearance of yellow fever, however, I think is almost altogetehr due to the killing of infected mosquitoes at the infected point. We do this by burning pyrethrum powder in the infected house and all the neighbouring houses. It is extremely gratifying to see how promptly the focus of infection is stamped out in this way; and it has been likewise surprising to me. I knew that some mosquitoes must escape from the most careful mosquito hunt, but we have apparently entirely controlled the disease this year by this method, when the conditions were exceedingly favourable for its spread. It must be that there are only a few infected mosquitoes in each individual case, and that they remain pretty close to the point of infection. And this probably is rendered greater, if we consider that it takes a mosquito fifteen or twenty days after biting before he himself is able to transmit the disease. If fifty mosquitoes bite a yellow fever patient, it seems to me quite probable from natural causes that only four or five would survive the eighteen or nineteen days required to render them dangerous. This sanitation was started and continued under the direction of General Wood, who was originally a medical office of the United States Army and was named Governor of Cuba. Now that his office has ceased to exist, it will, in all probability, be continued by his chief sanitary officer, Dr. Gorges. We feel that both of these gentlemen have earned, not only renown, but the gratitude of the civilized world.

THE TREATMENT OF TYPHOID FEVER.

The Dublin *Medical Press* of July 16th last says:—There are certain diseases that seem ever to be in the experimental stage of treatment. And evidence, not alone of the restless nature of the physician of to-day, but also of the progress of scientific knowledge. Of this latter class is typhoid fever, a disease which exemplifies in a peculiar manner the prevalent theories of disease. To-day we recognize that it is due to a toxin that shows a marked predilection for the adenoid tissues of the small intestines, as strychnine and other such poisons do for the muscle tissue. In typhoid the toxic products of Eberth's bacillus are as clearly recognized by their effects as are effects of eloterium or pilocarpine. But how does the toxin producing bacillus gain entrance to the body. In the pre-bacteriological days the text-books told of the poisonous vapours of decomposing products absorbed through the pulmonary air-cells. We then found the ground shifted and adapted to meet what was considered the requirements of the discovery of the bacillus. The alimentary canal was discovered to be the site of infection, and the introduction of the bacillus was accounted for by want of proper cleanliness—the soiled apparatus and stained linen not having been removed prior to their being dried up, and, as such, becoming sources of infection. Withal, some physicians were not satisfied with all this explanation, and a diligent search commenced for the primary colony of the germ of the disease, and naturally enough an endeavour to attenuate or destroy it. From these researches Dr. Wasdin concludes that the primary germ colony of disease cannot be considered as occuring in the intestinal canal, but to be normally located in the respiratory tract—a theory which recalls that of the past, and one which in part accounts for the rare case of typhoid in which the clinical symptoms without the normal pathological conditions are not present. According to Dr. Wasdin's report, the bacillus toxin from the blood current gives rise to all the well-known terminal expressions: infection of the intestinal canal, the serous membranes, the bone marrow, and so forth. To reach the affected area in the lung an

atomised solution of acetozone is used, and the same drug is given in casuples three times a day. When the temperature threatens to be dangerously high, cold sponging is recommended. The good effect of the treament is stated to be marked from the first by an increased secretion by the kidneys, a decided lessening of the malodorous character of the stools, which become sterile. By the combined action of the oral administration of the drug, and its inhalation as an atomised or cloud fluid, the advocates of the therapy claim that they reduce the possibility of gaseous fermentation and its concomitants, haemorrhage and perforation, and at the same time the destruction of the secondary infection of the canal by the typhoid organism, thereby averting further toxaemia by absorption from the alimentary canal. The germicide is, therefore, to be directed against both the primary colony in the respiratory tract, and the secondary expression in the alimentary canal. The benzoyl-acetyl-peroxide, which has long been known as benzozone, the antiseptic used by Dr. Wasdin, is a nonpoisonous product of the aromatic series, prepared from benzoleic acid. The antiseptic and non-poisonous properties of the chemical are well known, and its use in toxaemias can be tentatively recommended. The treatment attacks the disease on an entirely new principle, the theory of which has much to commend it, not the least of which is the innocuous character of the therapeutic agent employed.

THE EXERCISE VALUE OF DANCING.

The Dublin Medical Press of the 9th of July, last says: —Dancing is a pastime proper to the seasons unfavourable to outdoor sports, and apart from its social advantages, it is entitled to regard, if only by reason of the muscular exercise which it entails, since this is indispensable to health. A correspondent, also an amateur statistician, has taken the trouble to calculate the distance covered by dancers in their gyrations. He finds that a valse of average duration represents approximately a run of a thou-

sand yards. This is the longest dance, with the exception of the quadrille, which, with its four figures, covers nearly 1,800 yards. The mazurka is only equivalent to about 900 yards, and the polka to 800, while the lazy *pas de quatre* is barely 700 yards. Carrying his statistical ingenuity still further, he estimates that the usual series of dances at an ordinary ball, beginning at 10 p. m. and finishing at 5 a. m., represents no less than 56,000 steps, equivalent to nearly 25 miles on level ground. Admitting that the dancers are few in these degenerate days who go conscientiously through the entire list of dances provided for their entertainment, the fact remains that each man (and woman) who does his (or her) duty accomplishes a very respectable amount of exhilarating exercise. The value of exercise from a physiological point of view is greatly enhanced by its exhilarating effects, and this is one reason why the daily "constitutional" fails to yield the health-giving effects of cycling, golf or dancing, the only drawback to the last named being the lack of fresh air and sunlight, which add so materially to the enjoyment and salutary effects of all forms of outdoor exercise.

SO-CALLED "CHRISTIAN SCIENCE."

While it is totally incomprehensible to the practical, hard-headed common-sense individual, that any one should pursue such an intangible chimera as "Christian Science" with such sublime faith as to depend upon it in the presence of serious bodily illness, certain it is that the disciples of this vicious religious monomania are increasing in number and temporal power, and that it is no longer safe to entirely ignore it as a menace to the health and well-being of the community. Both the medical and secular press have devoted considerable attention to the subject, largely in the way of ridicule, but the most powerful, logical and altogether unanswerable argument we have yet seen is comprised in a series of short lectures by Rev.

Andrew F. Underhill, of St. John's Episcopal Church, Yonkers, N. Y., entitled "Valid Objections to So-Called Christian Science." Realizing that their interests are identical with those of the medical profession, and that the enemy of one is the enemy of both, the Arlington Chemical Company is anxious to do its part in relegating this absurd cult to the limbo of oblivion where it may rest peacefully side by side with the many foolish fads that have preceded it.

Appreciating the force of the argument referred to, and being convinced that it will place in the hands of the physician a well-forged weapon wherewith to combat such a subtle and dangerous enemy, the Arlington Chemical Company has obtained the permission of the author to reprint these lectures in booklet form and distribute them to physicians. If any of our readers have been overlooked in the mailing, a request to the above company will bring a copy.

Dr. Osler relates an anecdote of Dr. Benjamin Winslow Dudley, of Lexington, Ky., who was one of the most famous lithotomists of his day. No surgeon in the South or West had such a reputation, and he more than any one else built up the fame of the Transylvania school. In 1837, a poor lad with stone was brought to him from one of the distant settlements. The operation was successful and when the parents asked Dr. Dudley for his fee, knowing their circumstances, he refused to take anything. The young lad was deeply impressed by the generosity of the great surgeon and made a resolve that if ever he became rich the fee should be paid. About two years ago one of the heirs of Dr. Dudley had a letter from W. G. Saunders, of Iowa, stating that he was anxious to make arrangments to pay a long-standing indebtedness and asked if a fee of $500 would be suitable for the operation of lithotomy performed on him by Dr. Dudley in 1837. Last year the executors of Mr. Saunders wrote that in a codicil of his

will directions were given to pay the fee with interest and they had much pleasure in handing over the sum of $2,390.

Dr. McHull, of Atlanta, Ga., writes to *American Medicine*, that he had occasion recently to look through the death certificates in the office of the Board of Health. The following were assigned as causes of death in certain cases: "Broken thye," "bad blood," "hemmorrhage from nable," "mesals," "heart dropse," "bilious liver," "grastritis," "angina becgrois," "ptesis." "Parlices" caused death in one, while "perrallisis" was the cause in another. Multitudes died of "colery infantum;" a few of "colarah morbus;" one physician was not sure whether it was "dirhea" or "disentary;" another, however, was quite sure that "dyorhear" was the cause of the death of his patient. One infant succumbed to "choaking croup:" another patient passed away for "want of proper treatment."

Book Reviews.

Progressive Medicine. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, assisted by H. R. M. Landis, M. D., Assistant Physician to the out-patient department of Jefferson Medical College. Vol. III., September, 1902. Lea Brothers & Co., Philadelphia and New York, 1902.

The present volume embraces diseases of the thorax and its viscera, including the heart, lungs and blood vessels; dermatology and syphilis; diseases of the nervous system and obstetrics. As an epitome of the literature of these subjects for the last three months is given, it will readily be understood that it is quite impossible to critically examine and comment upon such a mass as is included in this volume of four hundred pages. We have, however, passed several hours in reading the most important of its contents, and have been struck with the practical character of the majority.

The chapter on Diseases of the Lungs, by William Ewart, of London, while emphasizing the fact that one disease, pneumonia, has not made much progress for many years towards successful treatment, yet intimates that its future seems decidedly bright. We note, and with pleasure, that the "lost art," bleeding, is once more being recommended for employment "in the early stages in strong middle-aged subjects with difficult respiration and heaving pulse." We have, in the early years of our practice, seen such immense relief follow its employment in several such cases, that we have never ceased to wonder at its not being used. The employment of the anti-pneumococcus serum has been tried by many, but not one seems to write of even average success. We find perhaps the most satisfactory part of the treatment of this disease, as recorded in this volume, is that by the carbonate of creosote (creosotal), a paper on which we published a few months ago. The success, as recorded by more than one writer, has been phenomenal. The portion devoted to Pulmonary Tuberculosis brings up to date a subject which, as the whole profession is aware, is to-day the burning question of the hour. We have been particularly struck with the recommendation of Robinson (*British Medical Journal*, Feb. 22, 1902), which we fully endorse, that wards should be set apart in all general hospitals for the treatment of phthisis, both as a humanitarian duty, and also for the important object of medical education. At present it is doubtful if many graduates of the present time are able to follow a single case of phthisis from commencement to the end. In that part devoted to diseases of the brain some interesting cases of brain tumour successfully removed are recorded.

The fourth and last, but not least, article in the volume is prepared by Richard C. Norris, of the University of Pennsylvania. That it is well done goes without saying, as is all that appears from Dr. Norris' facile pen. The entire ground of obstetrics, covering pregnancy, the management of labour, obstetrical surgery, tumours complicating pregnancy, labour obstructed by pelvic deformity, placenta previa, post partum hemorrhage, the management of puerperium and the care of the newborn infant have been gone over in a painstaking way that insures the reader of *Progressive Medicine* a complete *résumé* of all that is new in these important branches of the subject.

In short, this volume will be found to contain all that is new on the subjects which it covers.

In medical literature so vast is the number of volumes and periodical articles which annually appear that no practitioner can hope, without such an aid as *Progressive Medicine*, to keep abreast of the rapid advances that take place, and no one who attempts to do his duty by his patients can afford to be without these volumes, and there is no one, however well he may be posted, but can find ample material well worthy of his careful investigation and study.

F. W. C.

Reynolds' & Newell's Practical Midwifery. A Manual of Obstetrics for Students and Physicians, by Edward Reynolds, M. D., Assistant in Obstetrics, etc., and Franklin S. Newell, M. D., Assistant in Obstetrics and Gynecology in Harvard University Medical School, Boston. In one octavo volume of 531 pages, with 253 engravings, and 3 full-page coloured plates. Cloth, $3.75, net. Lea Brothers & Co., publishers, Philadelphia and New York, 1902.

The authors in the preface state that this work is written in a dogmatic style so as to be more useful to students and for teaching purposes. There would only be one ground possible for writing a work like this in such a manner and we feel that they have thoroughly justified their assertion—"Of all the books on the subject lately printed we have come across no book so well calculated to teach the student modern obstetrics." It must be highly commended. All who desire to learn obstetrics should have a copy of it.

H. L. R.

Disease of the Anus, Rectum and Pelvic Colon. By James P. Tuttle, A. M., M. D., Professor of Rectal Surgery in the New York Polyclinic Medical School and Hospital, Visiting Surgeon to the almshouse and workhouse hospitals. D. Appleton & Co., New York, 1902.

The volume is of convenient size, printed on good paper, with eight coloured plates and three hundred and thirty-eight illustrations. Credit is due the publishers. The subjects treated have been dealt with in a thorough and systematic manner. The author has had a wide experience in rectal diseases and has set forth his views and methods in such a way as to be both pleasant reading and of real value to the general practitioner when he is called upon to treat diseased conditions in this field of surgery. The book shows that many advances have been made within the past few years in this field of surgery. Both improved methods of examinations and treatment have been clearly presented. Chapter 1 deals with embryology, anatomy and physiology. Chapter 2 discusses malformations of the anus and rectum. Chapter 3 is devoted to methods of examination and diagnosis. We were interested in reading the article on hemorrhoids and glad to find the clamp and cautery advocated as the operation of choice in the radical cure. It is claimed that where the operation is properly performed hemorrhage is practically never met with. This has been our own experience. Stricture, too, may be said to never occur. Throughout the book treatment of the various diseased conditions has been gone into in detail, a character of the work which is sure to be appreciated.

F. R. E.

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